

How Does One Manage 'Information'?

Making sense of the information being received

by Maj Randall J. Simmons

Clearly defining the roles and responsibilities of information managers and providing core competency training is essential to proper employment of a rapidly emerging warfighting tool. Information management (IM) is the latest buzzword, and a variety of techniques are becoming vogue within the Department of Defense (DoD), as are the tools with which IM is being conducted. Since emerging on the scene as a discipline some 15 years ago, IM has created quite a stir as it attempts to find a rightful place within the DoD and, more specifically, the Marine Corps. We have thrown numerous applications and publications at the problem without truly understanding the root of the issue. That issue is that we do not know what information we are trying to manage. Without a better understanding of that issue, we are chasing our proverbial

"By wisdom a house is built, and through understanding it is established."

—Proverbs 24:3

tails and establishing a rather elaborate house of cards that those Marines called upon to be IM officers (IMOs) have to contend with, maintain, and manage to the ultimate satisfaction of the commander.

Coming from an application development background and armed with a degree from the Naval Postgraduate School in information technology (IT) management, I am well acquainted with the definitions of data, information, knowledge, and understanding. This seems to be a problem, though, as in the joint world, the Army defines

them slightly (if not fundamentally) differently than the IT world, and has thus caused some translation problems within the DoD as we refine IM and the IMO.

At its most fundamental level, data is disorganized, unrefined, unprocessed bits and pieces of something that we have taken an interest in and wish to make sense of, akin to the letter tiles in a box of Scrabble. Once we arrange the letters into words, sentences, and paragraphs that make sense to us, it becomes information, and we can then begin to apply our experience and education to begin our processing. We and our fellow subject matter experts (SMEs) begin to shape the information so that it eventually becomes knowledge to us as an organization. Here is where a transformation occurs; as we submit this knowledge to a superior organization in our chain of command, it returns to being nothing more than information to



We need to know what information we are trying to manage. (Photo by PFC Franklin E. Mercado.)

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that organization. Despite the amount of time devoted to crunching the information, the man-hours, the education required, the experiences gained to apply our expertise so the information assists our organization from our perspective, the next higher group of SMEs has not had the opportunity to apply their education and experiences to the product, and thus it is not yet knowledge to them.

The ultimate goal of all we do as general staff officers is to provide options for the commanding general (CG) in order for him to reach a conclusion and then a decision by which the force can take action. In order to do this, the CG must apply all of his education, experience, and knowledge to the resulting product of his small units, intelligence collectors, major subordinate commands (MSCs), and coded staff sections (G-1 (personnel), G-2 (intelligence), etc.). This becomes what we call understanding. At the highest level, understanding is the pinnacle of an organization as it can apply no more education, experience, knowledge, or processes in order to make it any more understandable to that organization. The head of that organization (the CG in this instance) can now make a decision that will be acted upon to satisfy all or part of his mission. Finally, in what I describe as the IM continuum or loop, the resulting actions taken upon the CG's decision returns to the lowest echelons of command as information to renew the process. Figure 1 explains the IM continuum graphically.

Collaboration is also a buzzword and has fast become part of the IM lexicon, adding to a rapidly building dictionary of terms of reference that spans the chasm between IT-types and the warfighters who make up the remainder of our beloved Corps. Simply put, collaboration is nothing more than working together (more salty Marines may recall this as "gung ho"), and in the context of IT and IM it means working together across great distances.

With this construct, we are now able to address the MSC and staff section as microcosms of information processors. The tough nut to crack is how each of these processors collaborates with each

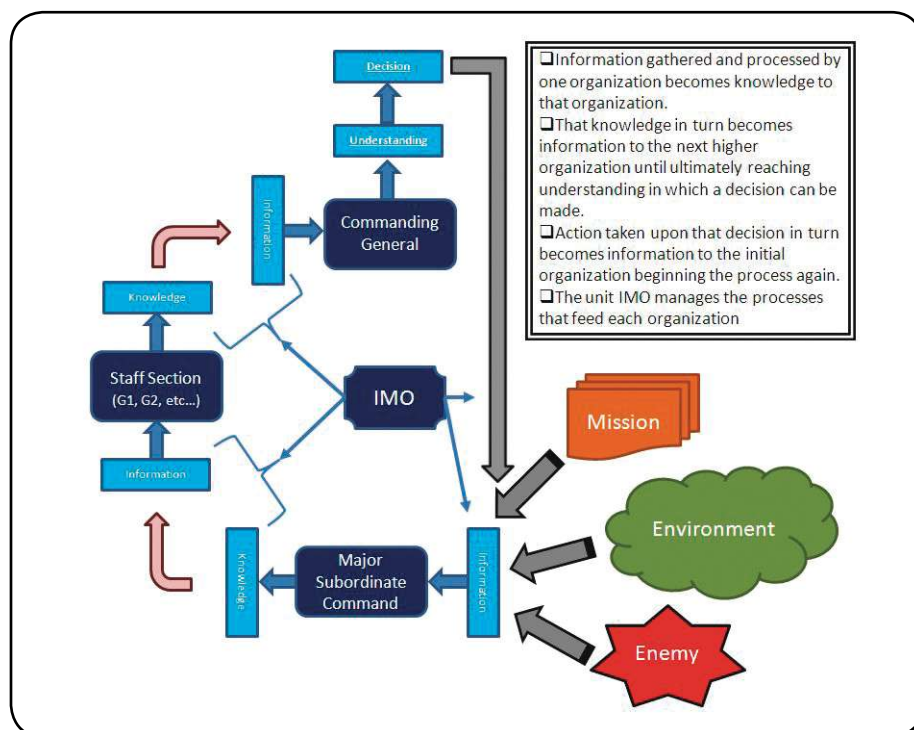


Figure 1. IM continuum.

other and external entities. Currently, the DoD has called upon Adobe's application, Connect Pro, and Microsoft's SharePoint to satisfy the needs of the many. As tools, they are as good as any available; however, they can be quite the bandwidth hog in an already tapped network. Adobe Connect Pro has provided a venue by which leaders can conduct battle rhythm (BR) events, share files, and conduct briefings with voice and visual presentations (sans video) when a physical meeting may be prohibitive because of the cost of travel or the inherent dangers of being in a combat zone. An additional resource in the IMO's stock list is online chat, be it Transverse, SPARK, Mako, or mIRC (Microsoft Internet Relay Chat, currently unauthorized in garrison). These instant messaging applications allow for text-based conversations to span the various networks. However, what commanders, staff, and information managers alike must bear in mind is that the focus must rest on the information requirements of the organization and not the requirements of the tools.

Organizational staff sections were derived from the Napoleonic paradigm and have grown as military cultures

have adapted to modern conflicts, adding sections to better suit the uniqueness of their focus, such as plans and command and control. The one thing that has not changed is the stovepipe that each section has created with regard to its processes and the information that gets processed. This is a natural conclusion of highly specialized training and not an indictment of the system. However, these sections cannot work independently and must rely upon external information to competently accomplish their tasks. For example, the intelligence section (G-2) must be in contact with a variety of agencies (Joint Analysis Center Molesworth, Central Intelligence Agency, Defense Intelligence Agency, etc.), as well as weather bureaus and topographical and demographical data on a country, in order to give the CG a virtual picture of where he will be conducting combat operations. The operations section (G-3) contends with troop strength and composition, force structure, supporting arms and coalitions, battle plans, and contingencies designed to win the fight. Neither can operate effectively without information from each other and should provide it continually as the G-3 cannot plan

properly without knowledge on the area of operations (AO), and the G-2 cannot possibly know everything about the entire country but must tailor his product to the AO. This symbiotic relationship is shared among the staff sections and must be cultivated in order to maintain a healthy operational tempo.

The term for the collection of processes that integrate and develop effective plans is B2C2WG (boards, bureaus, centers, cells, and working groups). The B2C2WG contains staff officers and SMEs who meet at times designated on the BR and smooth out the grinding of gears that inevitably takes place as plans are made and we encounter the enemy and environment. Groups, such as the fires and effects coordination cell that have focus groups (such as the targeting huddle, targeting steering group, and the targeting working group) and the aviation support working group, meet to further support the ground scheme of maneuver and prosecute the air tasking order (ATO), just to name a couple. The BR is complex but structured and "calendar designed" to meet mission goals. It must remain adaptive to changing situations but static enough to attenuate a rather disorganized combat environment and prevent surges and lulls in the operations cycle.

The IMO has been tasked with the nebulous duty of managing "information," but without guidance and experience his job is nearly impossible. The foundation that the IMO must have is experience with how a staff communicates and what type of information goes into, through, and out of the staff sections. (In my opinion, this requires a field grade officer at the MEF and division levels.) He must have a working knowledge of their processes so he may improve upon them and attempt to reduce the instances of redundancy and waste. Further, the IMO must maintain cognizance of all BR events, especially the B2C2WGs (and their 7-minute drills), that populate the BR calendar. To achieve this goal it is imperative that each section maintain its standing operating procedures (SOPs) and utilize the IM representative (IMR) each section should assign to provide advice to the IMO. If a section fails to keep its SOPs

current and relevant, then the SOPs are nothing more than a publication of stuff, and not very interesting stuff at that.

The final slice of the IM pie consists of the applications that the staff sections require to do their jobs. While the IMO does not choose these applications, he must have the awareness of how they fit into the conduct of the CG's guidance and how they support the mission. He must be able to provide advice in choosing the right application. Application software is written to perform a specific task or function, and it becomes increasingly difficult to make a one-size-fits-all program, but that does not stop us from wanting them. Theater battle management core systems (TBMCS) is such a system used to prosecute the air war and facilitate the creation of the ATO. Prior to the launch of TBMCS, there were three applications required to do the same thing (force, unit, and intelligence). This is merely an example of a complex application that the aviation combat element required to perform its part of the mission. The IMO must be aware of how to configure and make TBMCS available to the user audience. He must do this with other such systems that support other staff sections (advanced field artillery tactical data system, common logistics command and control system, command post of the future, command and control personal computer, information operations system v1, etc.), and he must provide the means for stakeholders to coordinate their efforts with these systems (and by the word "systems," I refer to the suite of applications, not the network) and execute their mission. The most crucial part of this aspect is that the IMO is not there to automate their jobs but to provide a tool with which they can perform their jobs more effectively and efficiently.

Now that we have a more concise look at the information that the IMO has been tasked with managing, we can begin to codify how he will go about doing so. While each command is unique and brings with it a wealth of knowledge and experience that can be applied to the mission, categories emerge that provide a path that the IMO can follow to make the staff function more effectively

and efficiently in providing the CG the information he needs in order to make decisions that accomplish his mission. I belong to a group of stakeholders within the Marine Corps that is working this issue and providing more clearly defined roles and responsibilities for the IMOs of the Operating Forces and has recommended numerous solutions to the IM collective, such as following the command and control roadmap and applying the use of common data, virtualizing machines for all software (using one computer/server, but dividing it into logical segments), and standardizing training across the enterprise. This last piece, training, is critical and one that must be bought into by senior leadership so that the IMO does not become simply an ISMO (information systems management officer) on steroids. There must be a clear distinction between the G-6 (communications) world and the IMO. The IMO works for the chief of staff for a specific reason as he is the enforcer of the CG's guidance and provides a crucial service to the staff that leverages the product that the G-6 provides but goes the further step to facilitate collaboration within the staff.

As with our civilian counterparts, when it comes to informational needs of any organization, we must first define the requirements; to Marines this is the mission. This is the foundation of IM and must be clearly understood by all parties. Operations orders, fragmentary orders, and subsequent tasking define the force structure, roles, and responsibilities of the command. Each MSC and staff section must then develop, author, and publish SOPs that codify all processes, information exchange requirements, billets, duties, and required inputs and end products; further, these SOPs must be completely understood by all members of their respective sections as this is typically the first symptom of communications breakdown. The processes in the SOPs are what the IMO has awareness of and should be his point of reference for his IMRs whenever issues arise.

Next, the IMO must generate a plan for information lifecycles as they pertain to the command and the mission, meaning limit the use of shared drives.

These are dinosaurs in the IT world and cause many lost man-hours as Marines search for some document in the endless forest of subfolders. They must be constantly aware of how old documents are, updating or deleting them as necessary. Additionally, the IMO must develop a plan for the unit website to facilitate the ease of communications across the command and to provide access to SOPs and information that is needed and may need to be provided to other entities. Current best practice is to follow a three-click rule (meaning you should be able to find what you are looking for in three mouse clicks). In this respect, less is more and simpler is better. Resist the temptation to fill up your sites with photos or graphics as they do little more than increase the aesthetics of the page and tend to increase the wait time as pages load; instead, use links that open separate windows for such things as maps and charts. The CG's portal must contain commander's critical information requirements and requests for information, items that the boss needs to have at his fingertips when he has time to visit his computer. Numerous examples exist of CG dashboards that are functional as well as chocked full of feng shui, technically speaking that is.

Publish a use matrix of all systems utilized by the command and provide user guides when available. Link these to your Annex U (IM) of the operations order and keep the links current. Do the same with whatever chat application you use. Provide chat moderators within each section who are responsible for oversight of the chat rooms, and publish a chat room matrix that clearly defines who should be communicating in what room. Links to the applications should be provided on the SharePoint site as well so access may be attained via the sections portal and easily maintained.

Keep your IMO working group active and relevant. Assign tasks to your IMRs that require them to involve their section chiefs or officers in charge to keep the SOPs up to date. Solicit their feedback on IM issues, such as process improvement and communications issues. Visit the staff leads (i.e., G-1 actual) to discuss ways to improve cross-



Face-to-face discussions can lead to a better understanding of processes and SOP development and currency. (Photo by LCpl D.J. Wu.)

section collaboration. Are they able to give and receive info easily? Can they find what they need on the SharePoint site? Is the site too complicated or too busy? Are any links broken? Always seek self-improvement as well as staff improvement.

As best as possible, provide links to outputs from all sections and MSCs as this gives others opportunity to review the span of knowledge across the command and makes for a better access point when a staff section needs information. This acts also as the command library and is more easily maintained by those tasked with care and maintenance of critical documents. Allow each section to have its own SharePoint site, but review them and keep them maintained in accordance with Marine Corps and DoD policy as well as CG's guidance. Changes should come through the IM working group and have the IMO as ultimate authority over content and access.

Conclusion

The Marine Corps has taken dramatic steps on the IM path and appears to be headed in the right direction but runs the risk of sliding down the slippery slope of marginalizing the IMO by making him the whipping boy when a section does not understand or follow their SOPs. Reducing the importance

of the IMO to little more than a SharePoint administrator is an enormous professional faux pas that must be avoided as it can lead to sections reverting back to stovepiping information and slowing down the decision cycle that the CG relies upon to succeed in his mission. The information that a command has available is overwhelming when taken as a whole and must be digested in less than elephant-sized chunks, or it will be impossible to function as a staff. The IMO plays a critical role in streamlining how information flows into, through, and out of an organization by providing the resources each section needs to perform its tasks. Long gone are the days of waiting for mail and carrier pigeon. Now we have e-mail, chat, and SharePoint. But even these are nothing more than venues. The IMO helps a command make sense of the information flowing through them and provides tools to make the command's work simpler and less time-consuming.

